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From: Peter Israelsson
Sent: Sun 9/18/2016 12:47:21 PM
Subject: Lower Passaic RI/FS - water column model-data time series for sv-CWCM events
[T000 wc diag temporal wtideinfo 2016-09-17.pdf](#)
[T014 wc diag temporal wtideinfo 2016-09-17.pdf](#)
[T102 wc diag temporal wtideinfo 2016-09-16.pdf](#)

Ed and James –

We are transmitting a few CFT model plots in advance of the meeting on Tuesday.

In follow-up to your request at the June meeting, please find attached several comparisons of predicted and observed near-bottom water column 2,3,7,8-TCDD concentrations on intra-tidal timescales for 6 sv-CWCM events (the 2 “high flow” sampling events are not included). We limited the comparisons shown here to the 3 fixed LPR sample locations used in these events (RMs 0, 1.4 and 10.2), as the time series interpretation is more straightforward than for floating stations.

The figures show results for the CFT model version that was used in the draft RI submittals (red line) as well as two sensitivity runs that are included to support discussion of fluff layer diagnostics at the meeting on Tuesday:

1. A run that uses an altered fluff-bed mass transfer formulation based on EPA Comment 543, which we plan to adopt in revising the model (per discussions at the last meeting). In these runs the parameter values are unchanged from the RI model and the same initial condition is used to initialize the run. Consequently, this is an uncalibrated result, shown as the cyan dashed line labeled “*Revised fluff-bed mass transfer, with fluff (uncalibrated)*”. The changes to the mass transfer formulation cause the model to over-predict the water column with the RI settings/ICs (based on the WC calibration metrics in the draft RI), and so this exchange would be adjusted during calibration once other changes to the model and ICs have been incorporated. We have not attempted to do so given that the other changes are pending.
2. A run using the same code as above, but with the fluff-bed mass transfer coefficient set very high, to approximate the case of no fluff layer. This is the green dashed line labeled “*Revised fluff-bed mass transfer, without fluff (uncalibrated)*”.

We aim to send you some additional materials on a couple of other agenda topics on Monday.
Please let me know if you have questions in the meantime.

Thanks,

Peter

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